

The diagram illustrates a diesel engine system with a common rail fuel supply and a variable geometry turbocharger. The system includes the following components and connections:

- 18**: Fuel inlet line.
- 19**: Fuel pump.
- 20**: High-pressure fuel line connecting the pump to the common rail.
- 17**: Common rail.
- 21**: Fuel lines connecting the common rail to the injectors.
- 2** through **7**: Numbered injectors.
- 12**: Exhaust manifold.
- 13**: Turbine housing of the turbocharger.
- 11**: Turbine wheel.
- 9**: Compressor housing of the turbocharger.
- 10**: Compressor wheel.
- 14**: Intercooler.
- 15**: SOOTFILTER (part of the intake system).
- 22**: Variable geometry mechanism (VGT) actuator.
- 23**: μC (Microcontroller).
- 24**: Control line connecting the microcontroller to the VGT actuator.
- 25**: Air inlet line.

The air flow path is from the inlet through the SOOTFILTER (15), intercooler (14), and compressor (10) into the intake manifold (12). The exhaust flow path is from the engine (2-7) through the turbine (11) and turbine housing (13) to the exhaust manifold (12). The microcontroller (23) controls the VGT actuator (22) via a control line (24).

Fig. 2

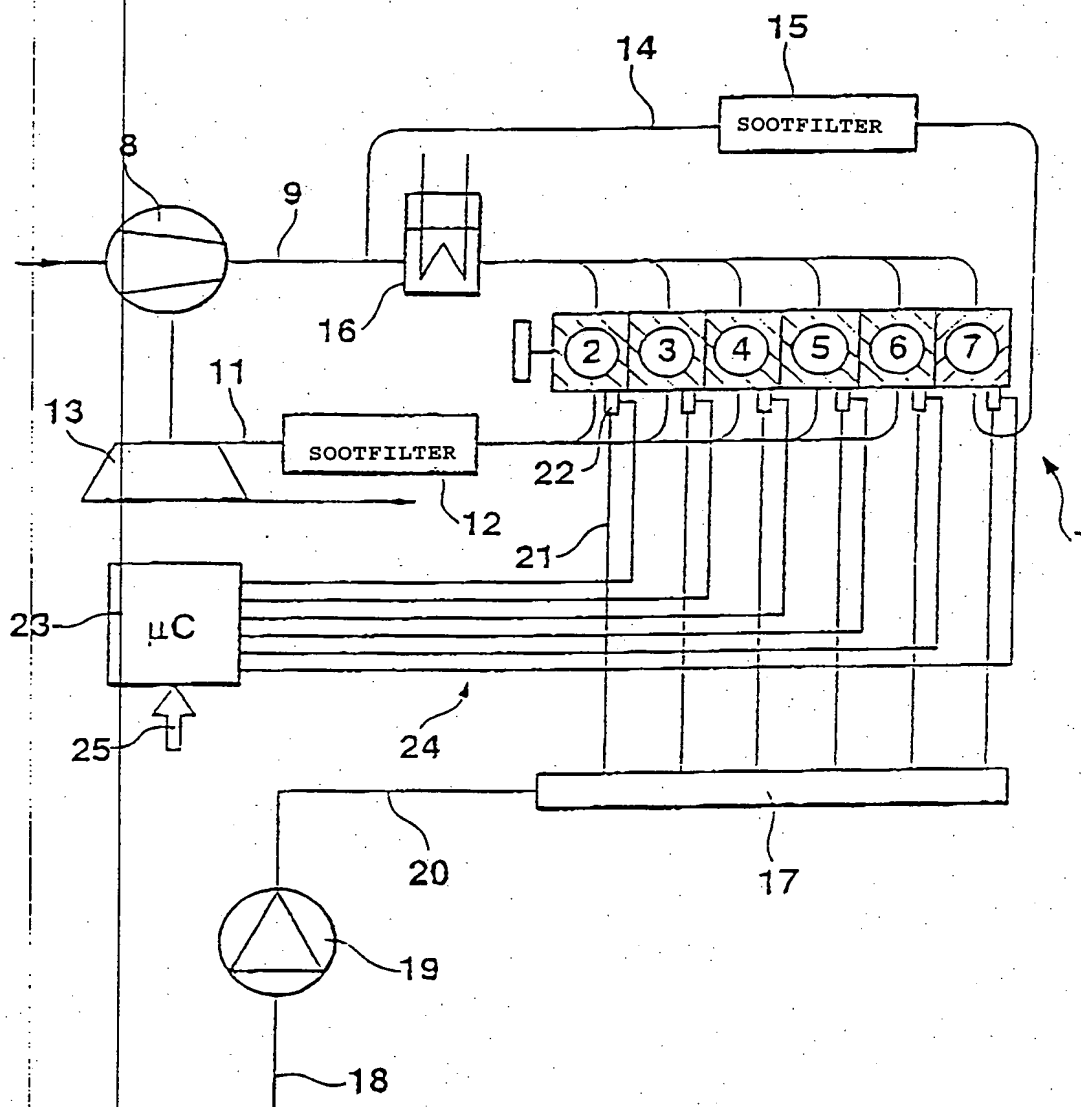


Fig. 3

